REMARKS

Previously presented independent claim 19 has been replaced with new independent claim 32 discussed below, with claims 20-30 remaining in the application depended from new claim 32, together with a newly added dependent claim 33.

Claim 32 specifies that each rib contains a plurality of symmetrical tread blocks separated by laterally extending grooves wherein the tread blocks have leading and trailing edges symmetrical with respect to a radial plane passing through a midpoint of said tread blocks and through an axis of rotation of the tire as discussed in detail in a previous amendment and as shown on a previously submitted sketch of Fig. 5 (copy enclosed). Claim 32 specifies that angle sipes are formed in each of the tread blocks extending at an angle between 2° and 15° with respect to the radial plane and are angled in opposite directions on opposite sides of the mid-circumferential plane and that the **sipes create a circumferential force** on each of said tread blocks and that said forces extend in opposite directions on opposite sides of the mid-circumferential plane creating an overall moment on the tire to affect tire RAT.

The Office Action in rejecting previously presented independent claim 19 contended that it had new matter because of reference to "other components of the tire." This feature has been eliminated from new claim 32. The claim also has been amended to eliminate the alleged new matter that the sipes do not compensate for residual aligning torque within each of the individual tread blocks, since the Examiner contends that the original disclosure did not describe each block as having residual aligning torque. Applicants' symmetrical tread blocks, and in particular, the angled sipes create a circumferential force on each of the individual tread blocks as shown on a marked-up copy of Fig. 1 and indicated as forces F_1 and F_2. These circumferential forces extend in opposite directions on opposite sides of the mid-circumferential plane 15 and create an overall moment on the tire to affect tire RAT as indicated by clockwise Arrow A which represents the moment placed on the tire tread.

As shown on the marked-up copy of Fig. 1, the sipes in each individual tread block on the left hand side of mid-circumferential plane 15 produce a circumferential force F_1 with the sipes in the individual tread blocks on the right hand side of mid-circumferential plane 15 produce a circumferential force F_2, which forces (F_1 and F_2) combine to create an overall moment on the tire tread as shown by moment Arrow A. The sipes do not produce a torque on each of the individual tread blocks. The sipes produce a circumferential force in one circumferential direction on each tread block which complements a similar circumferential force produced on the opposite side of the mid-circumferential plane in the opposite direction, so that when the forces are combined, the circumferential forces produce an overall moment on the tire tread to affect tire RAT. Again, the sipes are not intended to produce individual self-compensating torque in each of the individual tread blocks as in many of the prior art cited references, nor do they produce a self-compensating torque to result in a zero torque or eliminate RAT on the tire tread. A different effect is achieved by Applicant's tire tread by the use of angled sipes as defined in claim 32, that is, the creation of circumferential forces on opposite sides of the mid-circumferential plane, which forces add together to affect tire RAT by creating a moment on the tire tread. It is not intended to cancel RAT or reduce it to zero but to effect and change the RAT produced by the tire tread.

With the above features and principal in mind, consider whether the cited references disclose such a tire tread structure.

The Office Action in rejecting the pending claims, and in particular, independent claim 19 relies on Herbelleau (US 4,298,046), Germany DE 19506697, and Germany DE 4107547. Initially, it should be pointed out that none of these three references are concerned in any manner with affecting the RAT of a tire. All three tire constructions are concerned with improved traction and performance, especially in snow and ice and do not mention at any location that the tire construction is concerned with, nor does it intend to compensate for RAT.

Attached is a photocopy of Figure 6 of Herbelleau which admittedly shows angled sipes in the tire lugs. However, each of the tread blocks would produce a force F_1 in the shoulder ribs and F_2 in the intermediate ribs which would cancel each other out and would not create an overall moment on the tire, such as moment A as shown in the enclosed sketch of Figs. 1 and 2 of Applicants' tread to affect tire RAT. Due to the canceling effect of the various forces acting on the tread, it would not affect RAT in any manner in Herbelleau. Likewise, neither of the German references show any tire structure in which the lugs would create a circumferential force in opposite directions on opposite sides of the mid-circumferential plane in order to create an overall moment on the tire to affect RAT as now defined in claim 32. Admittedly, both of the German references show tire lugs with angled sipes, but not the particular arrangement thereof and the effect achieved thereby as now set forth in claim 32. Accordingly, it is respectfully submitted that Herbelleau nor German references DE 19506697 and DE 4107547 show an arrangement of angled sipes to produce the effect as set forth in claim 32.

A discussion is also set forth with respect to several of the previously cited references in order to show how Applicants' pneumatic tire as defined in claim 32 is distinguished therefrom. Japan JP10138715 is concerned with generating torque in each tread block in order to reduce residual lateral forces. This is completely opposite from Applicants' tread block and sipe configuration wherein the sipes do not provide a torque on each of the blocks as in Japan '715, but create a circumferential force F_1 or F_2 as shown in the enclosed copy of Figures 1 and 2. By providing the self-compensating effect in each of the tread blocks in JP '715, there would be a moment produced on the tire because all the individual moments of each lug would add up to give a resultant moment on the tire. However, this moment does not come from the circumferential forces of individual lugs as in Applicant's tire as defined in claim 32.

Japan JP 11-240314 (EP 1072445) shows a tread block having angled sipes in order to produce a RAT or torque in <u>each</u> of the tread blocks for restoring the blocks to their original shape. Again, the sipes do not produce a

circumferential force on the blocks in opposite directions of the mid-circumferential plane to produce an overall torque on the tire as that achieved by Applicants' tread and angled sipe arrangement.

Japan JP 04100706 is believed to be the closest reference to claim 32 in that it discloses producing an overall moment on the tire. However, it does so by angled leading and trailing edges of the lugs. The sipes are merely indicated as being formed in the tread blocks only at angles prescribed by the leading and trailing edge angles and not being used to create any circumferential force. Applicants' tread blocks are now defined as symmetrical which is completely opposite that of JP '706. JP '706 discloses angled sipes 28 which are formed to extend parallel to lines or planes L and M in non-symmetrical lugs. However, if the lugs were symmetrical, it would result in the sipes extending perpendicular or in line with line T and not be slanted, which is completely contrary or opposite to Applicants' tire as now set forth in claim 32. Accordingly, it is respectfully submitted that the pneumatic tire now defined in new claim 32 is not suggested in any manner or obvious in view of Japan '715, Japan '314, and Japan '706.

In view of the foregoing, the Applicant respectfully requests reconsideration of the claims and most earnestly solicits the issuance of a formal notice of allowability for the claims. Please call the undersigned attorney if any questions remain after this amendment.